MOTOROLA

ACCREDITED
Certificate Number: 1449-01

FCC ID: AZ489FT5846
DECLARATION OF COMPLIANCE SAR ASSESSMENT Part 2 of 3

Government & Enterprise Mobility Solutions
EME Test Laboratory
8000 West Sunrise Blvd
Fort Lauderdale, FL. 33322

Date of Report: August 5, 2005
Report Revision: Rev. O
Report ID: FCC rpt_i870_Rev O_050805
SR2563

Responsible Engineer: Kim Uong (EME lead Eng.)
Date/s Tested: 7/22/05 – 8/1/05
Manufacturer/Location: Motorola - Plantation
Sector/Group/Div.: iDEN Subscriber
Date submitted for test: 7/14/05
DUT Description: i870; TDMA: 236:310 (76.1%), 1:6, 2:6, 81:120, 1:12; 64QAM, 16 QAM & QPSK Modulation; 0.6W Pulse Avg. MOTOtalk (114:120 8FSK; 0.85 W nominal); GPS and Bluetooth capable
Test TX mode(s): 1:3, 1:6, 81:120, 114:120, 236:310
Max. Power output: iDEN/WiDEN - 0.640W; MOTOtalk – 0.891W, Bluetooth – 2.5mW
Nominal Power: iDEN/WiDEN - 0.600W; MOTOtalk – 0.850W, Bluetooth – 1mW
Tx Frequency Bands: iDEN - 806-825, 896-902MHz; MOTOtalk - 902-928MHz; BT - 2.402-2.480GHz
Signaling type: TDMA: iDEN; WiDEN; MOTOtalk; Bluetooth
Model(s) Tested: H85XAH6RR5AN-NWF1089A
Model(s) Certified: H85XAH6RR5AN-NWF1089A
Serial Number(s): 000AFJ00J2; 000AFJ00HZ
Classification: General Population/Uncontrolled
Rule Part(s): 15 & 90

Approved Accessories:
Antenna(s):
8575108A01 retractable ¼ wave antenna (806-825MHz, -7.6 dBi to -4.7dBi; 896-902MHz, -9.2dBi to -5.2dBi; 902-928Mhz, -9.2dBi to -5.2dBi
Battery(ies):
SNN5705C (Hi performance Li Ion); NNTN2291XXXA (Battery cover)
Body worn accessory(ies):
NNTN4747A (Belt clip); NNTN6231A (Carry Holster)
Audio/Data cable accessory(ies):
NSN6066A (Light duty RSM), NNTN5004A (headset over ear), NNTN5005A (headset over head), SYN8390B (Privacy earpiece), SYN8146C (Lightweight headset w/ boom mic), NTN8496A (Lightweight headset w/ mic), NNTN4033A (Privacy Earpiece/mic w/ PTT), NNTN5006A (Black Earbud), SYN7875C (Hearing Aid Neckloop), NTN8513B (Lightweight headband), NNTN5330A (Ear bud accessory), NNTN4620A (Silver ear bud), NNTN5774A (Stereo Head set); NKN6559A (USB Cable), NKN6560A (RS232), NNTN5405A (USB cable w/ charging), NNTN5406A (RS-232 data cable w/ charging)

Max. Calc. 1-g/10-g Avg. SAR: 1.32/0.92 mW/g (Body)
Max. Calc. 1-g/10-g Avg. SAR: 0.52/0.37 mW/g (Face)
Max. Calc. 1-g/10-g Avg. SAR: 0.59/0.40 mW/g (Head)

Based on the information and the testing results provided herein, the undersigned certifies that when used as stated in the operating instructions supplied, said product complies with the national and international reference standards and guidelines listed in section 2.0 of this report. This report shall not be reproduced without written approval from an officially designated representative of the Motorola EME Laboratory.

This reporting format is consistent with the test report guidelines of the TIA TSB-150 December 2004
The results and statements contained in this report pertain only to the device(s) evaluated.

Kem Enger's signature on file
Ken Enger GEMS EME Lab Senior Resource Manager, Laboratory Director,

Approval Date: 8/5/05

Certification Date: 8/5/05

Certification No.: L1050813P

Appendix E
DUT Scans (Shortened scans & Highest SAR configurations)

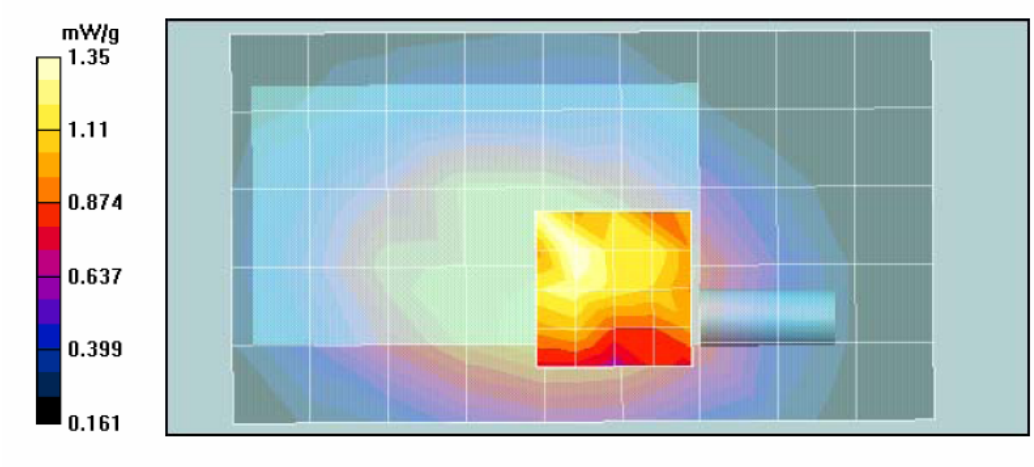
Shortened Scan Results

Motorola GEMS EME Laboratory
FCC ID: AZ489FT5846; Test Date:
Run #: ErC Ab 050729-13
Sim Temp: 20.4 C)
Model #: H85XAH6RR5AN-NWF1089A SN: 000AFJ00J2

Antenna: IN TX Freq: 813.5125 MHz
Battery: SNN5705C Start power: .609 W
Carry acc.: NNTN6231A Audio/Data acc.: NONE

DUT with carry accessory against the phantom
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1.31, Medium: 813 MHz FCC Body, Medium parameters used: σ = 0.97 mho/m, εr = 54.1; ρ = 1000 kg/m3
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Ab Scan/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm
Reference Value = 36.4 V/m; Power Drift = 0.084 dB
SAR(1 g) = 1.21 mW/g; SAR(10 g) = 0.860 mW/g

Comments: Short Scan at the body w/ body worn accessory against phantom
Shortened scan reflect highest S.A.R. producing configuration; Run time 8 minutes.
Representative "normal" scan run time was 21 minutes
"Shortened" scan max calculated S.A.R. using S.A.R. drift: 1-g Avg. = 1.27mW/g; 10-g Avg. = 0.90mW/g
"Normal" scan max calculated S.A.R. using S.A.R. drift: 1-g Avg. = 1.32mW/g; 10-g Avg. = 0.92mW/g
(see part 1 of 2 section 9.0 run # ErC-Ab-050728-16)

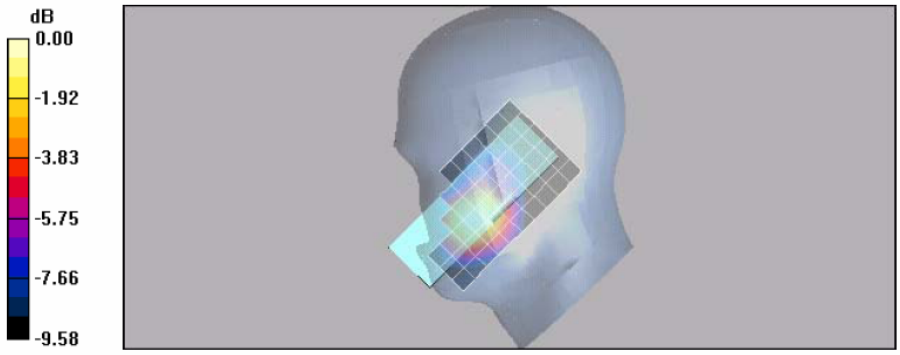


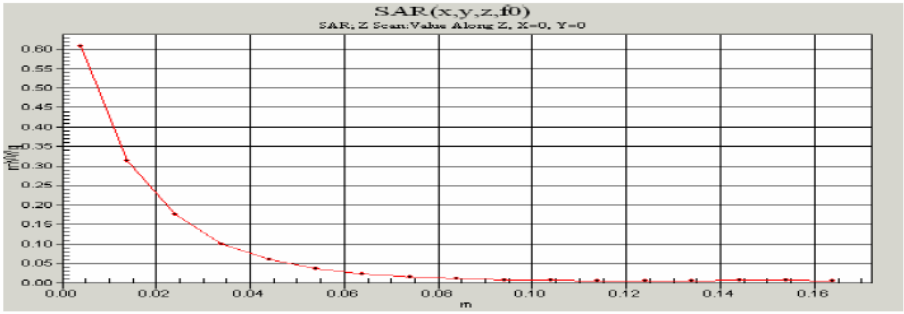
Highest SAR Configurations Results

Motorola GEMS EME Laboratory
FCC ID: AZ489FT5846; Test Date: 7/25/05
Run #: ErC Rear 050725-02
Sim Temp: 20.1 (C)
Model #: H85XAH6RR5AN-NWF1089A SN: 000AFJ00J2

Antenna: IN TX Freq: 813.5125 MHz
Battery: SNN5705C Start power: .631 W
Carry acc.: NONE Audio/Data acc.: NONE

DUT in cheek touch position
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.53, 6.53, 6.53)
Duty Cycle: 1:3, Medium: 813 IEEE Head, Medium parameters used: σ = 0.93 mho/m, εr = 43.1; ρ = 1000 kg/m3
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Right Ear - Touch position/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm; Reference Value = 26.3 V/m; Power Drift = -0.0347 dB
SAR(1 g) = 0.576 mW/g; SAR(10 g) = 0.392 mW/g

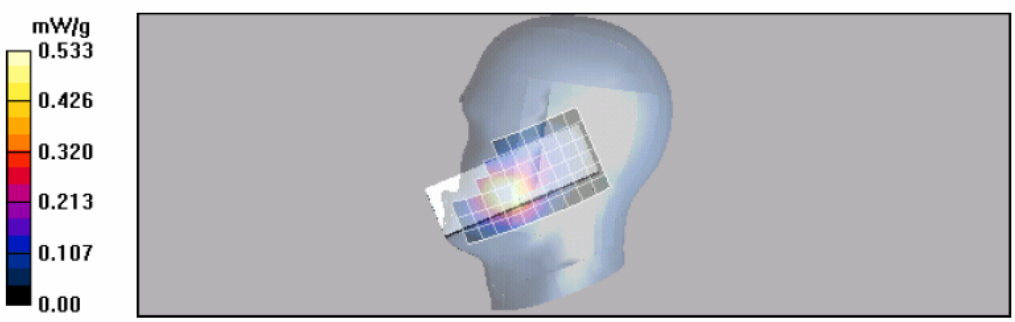


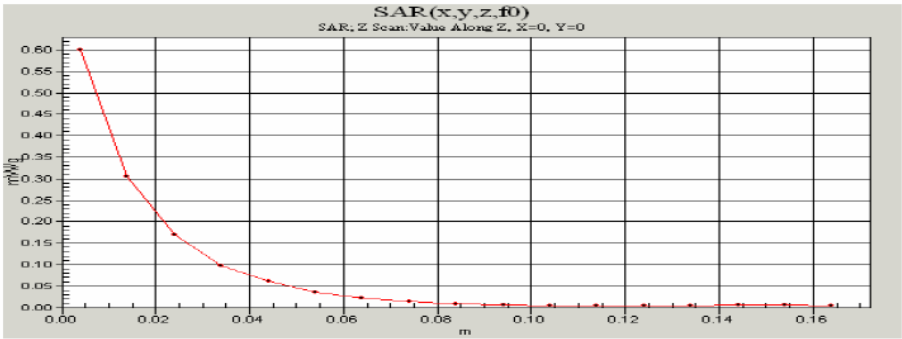


Motorola GEMS EME Laboratory
FCC ID: AZ489FT5846; Test Date: 7/25/05
Run #: ErC Rear 050725-03
Sim Temp: 20.1 (C)
Model #: H85XAH6RR5AN-NWF1089A SN: 000AFJ00J2

Antenna: IN TX Freq: 813.5125 MHz
Battery: SNN5705C Start power: .633 W
Carry acc.: NONE Audio/Data acc.: NONE

DUT in cheek touch position with BLUETOOTH on
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.53, 6.53, 6.53)
Duty Cycle: 1:3, Medium: 813 IEEE Head, Medium parameters used: σ = 0.93 mho/m, εr = 43.1; ρ = 1000 kg/m3
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Right Ear - Touch position/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm; Reference Value = 26.1 V/m; Power Drift = -0.0224 dB
SAR(1 g) = 0.569 mW/g; SAR(10 g) = 0.385 mW/g

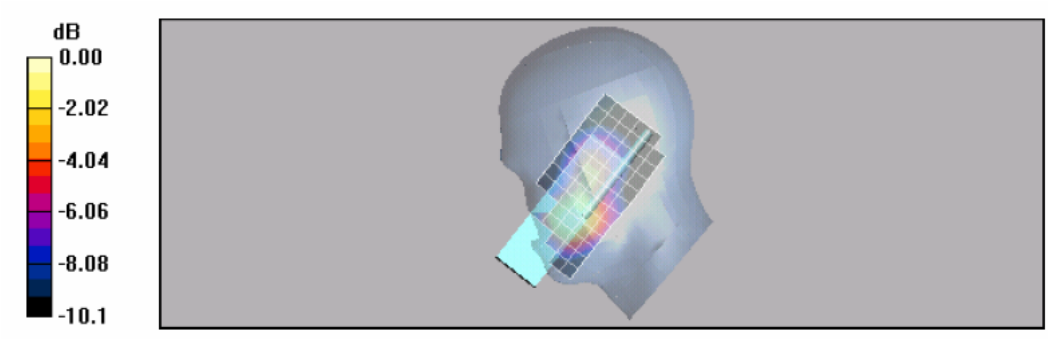


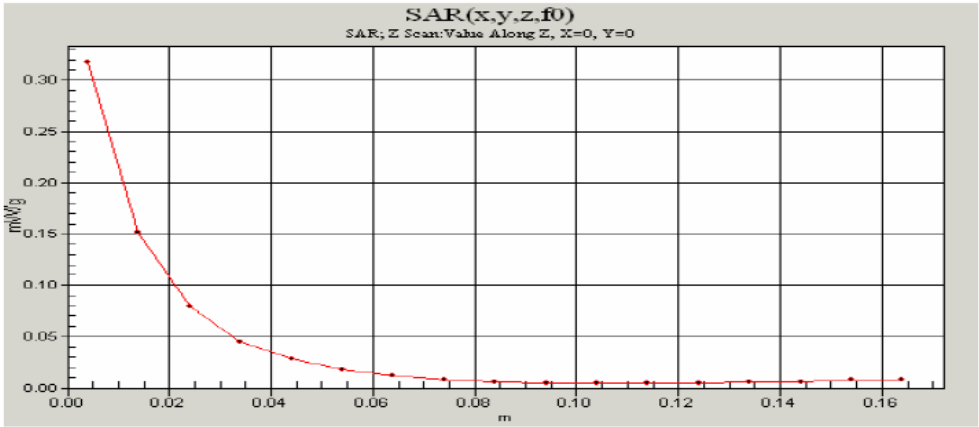


Motorola GEMS EME Laboratory
FCC ID: AZ489FT5846; Test Date: 7/25/05
Run #: ErC Rear 050725-04
Sim Temp: 20.1 (C)
Model #: H85XAH6RR5AN-NWF1089A SN: 000AFJ00J2

Antenna: OUT TX Freq: 901.98125 MHz
Battery: SNN5705C Start power: .632 W
Carry acc.: NONE Audio/Data acc.: NONE

DUT in cheek touch position
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.53, 6.53, 6.53)
Duty Cycle: 1:3, Medium: 899 IEEE Head, Medium parameters used: σ = 1.01 mho/m, εr = 42; ρ = 1000 kg/m3
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Right Ear - Touch position/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm; Reference Value = 18.5 V/m; Power Drift = -0.0339 dB
SAR(1 g) = 0.303 mW/g; SAR(10 g) = 0.203 mW/g

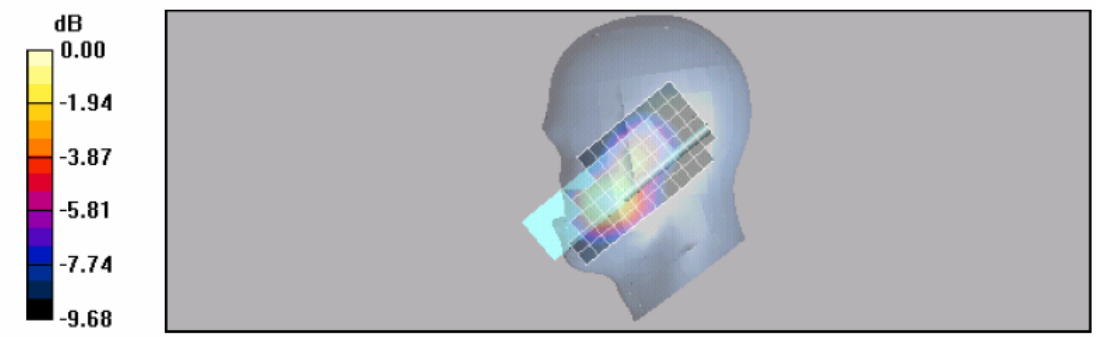


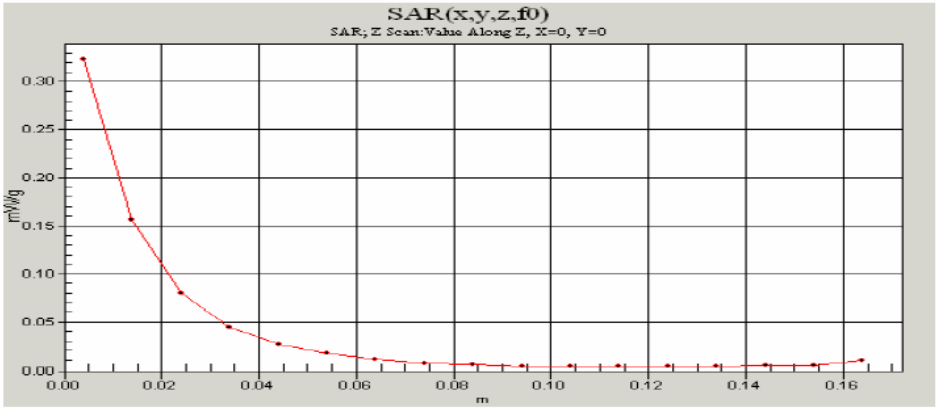


Motorola GEMS EME Laboratory
FCC ID: AZ489FT5846; Test Date: 7/25/05
Run #: ErC Rear 050725-05
Sim Temp: 20.1 (C)
Model #: H85XAH6RR5AN-NWF1089A SN: 000AFJ00J2

Antenna: OUT TX Freq: 901.98125 MHz
Battery: SNN5705C Start power: .634 W
Carry acc.: NONE Audio/Data acc.: NONE

DUT in cheek touch position with BLUETOOTH on
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.53, 6.53, 6.53)
Duty Cycle: 1:3, Medium: 899 IEEE Head, Medium parameters used: σ = 1.01 mho/m, εr = 42; ρ = 1000 kg/m3
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Right Ear - Touch position/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm; Reference Value = 18.4 V/m; Power Drift = 0.0167 dB
SAR(1 g) = 0.300 mW/g; SAR(10 g) = 0.201 mW/g

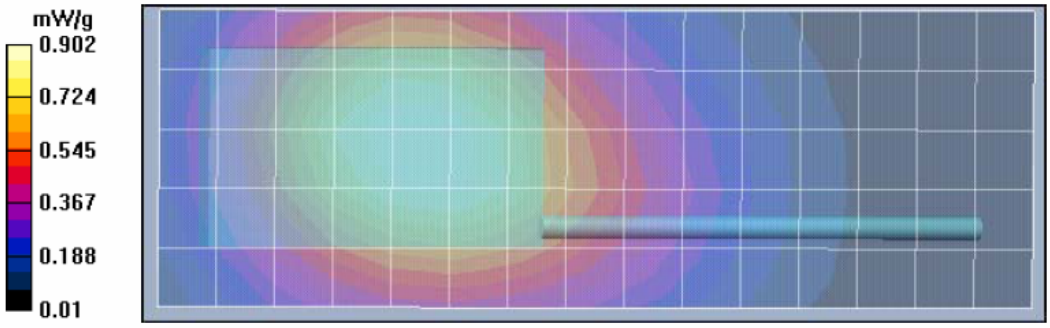


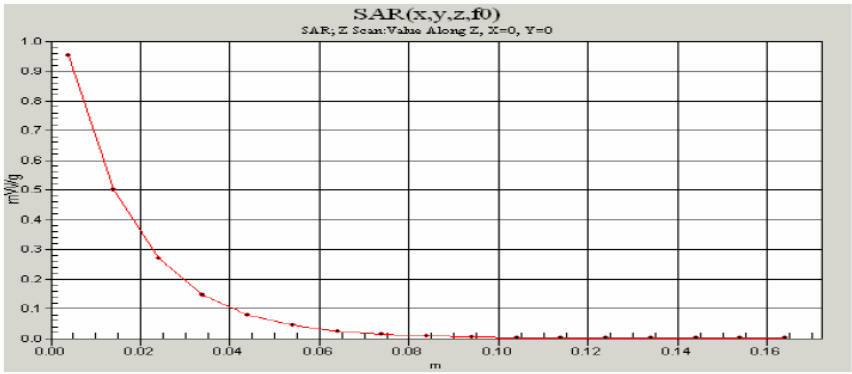


Motorola GEMS EME Laboratory
FCC ID: AZ489FT5846; Test Date: 7/25/05
Run #: ErC Face 050725-07
Sim Temp: 20.1 (C)
Model #: H85XAH6RR5AN-NWF1089A SN: 000AFJ00J2

Antenna: OUT TX Freq: 902.525 MHz
Battery: SNN5705C Start power: .852 W
Carry acc.: NONE Audio/Data acc.: NONE

DUT with front housing separated 2.5cm from the phantom
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.53, 6.53, 6.53)
Duty Cycle: 1:1.05, Medium: 915 IEEE Head, Medium parameters used: σ = 1.02 mho/m, εr = 41.9; ρ = 1000 kg/m3
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Face template/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.4 V/m; Power Drift = 0.432 dB
SAR(1 g) = 0.856 mW/g; SAR(10 g) = 0.616 mW/g

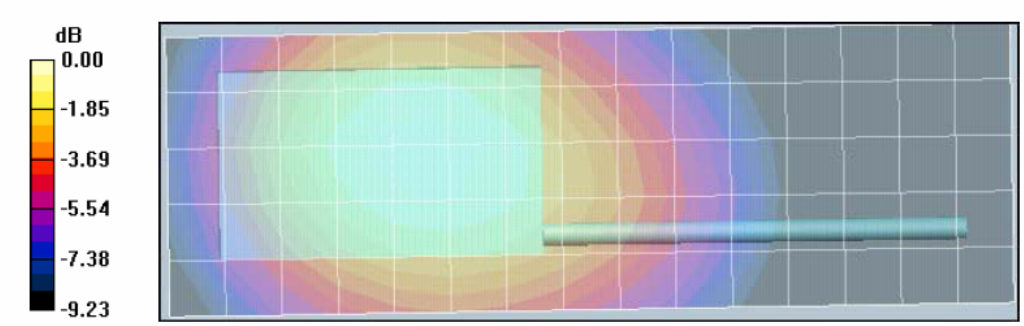


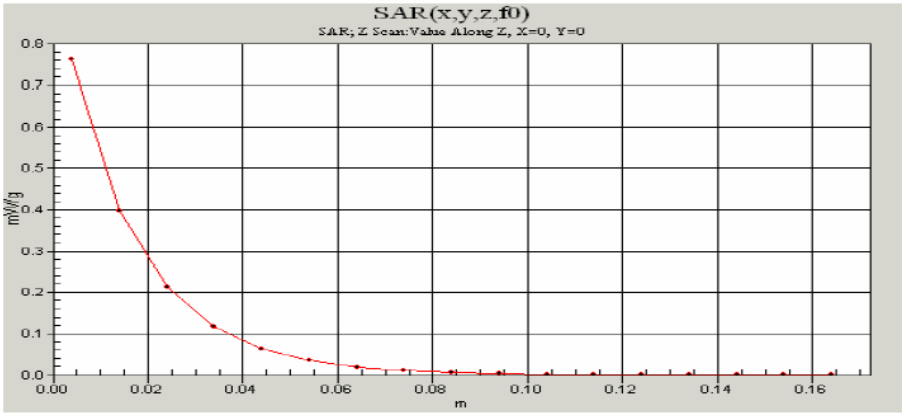


Motorola GEMS EME Laboratory
FCC ID: AZ489FT5846; Test Date: 7/25/05
Run #: ErC Face 050725-08
Sim Temp: 20.1 (C)
Model #: H85XAH6RR5AN-NWF1089A SN: 000AFJ00J2

Antenna: OUT TX Freq: 902.525 MHz
Battery: SNN5705C Start power: .854 W
Carry acc.: NONE Audio/Data acc.: NONE

DUT with front housing separated 2.5cm from the phantom with BLUETOOTH on
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.53, 6.53, 6.53)
Duty Cycle: 1:1.05, Medium: 915 IEEE Head, Medium parameters used: σ = 1.02 mho/m, εr = 41.9; ρ = 1000 kg/m3
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Face template/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.6 V/m; Power Drift = -0.542 dB
SAR(1 g) = 0.880 mW/g; SAR(10 g) = 0.631 mW/g

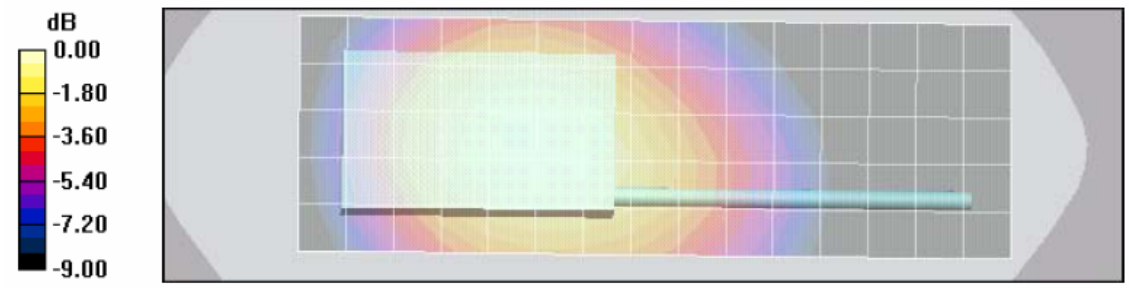


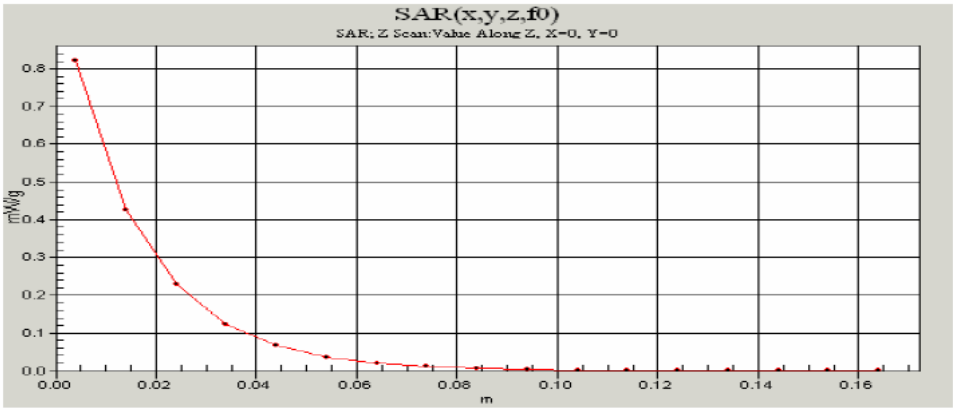


Motorola GEMS EME Laboratory
FCC ID: AZ489FT5846; Test Date: 7/24/05
Run #: ErC Face 050724-07
Sim Temp: 20.8 (C)
Model #: H85XAH6RR5AN-NWF1089A SN: 000AFJ00HZ

Antenna: OUT TX Freq: 902.525 MHz
Battery: SNN5705C Start power: .840 W
Carry acc.: NONE Audio/Data acc.: NONE

DUT with front housing separated 2.5cm from the phantom
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.53, 6.53, 6.53)
Duty Cycle: 1:1.05, Medium: 915 IEEE Head, Medium parameters used: σ = 1.02 mho/m, εr = 42; ρ = 1000 kg/m3
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Face template/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.5 V/m; Power Drift = -0.292 dB
SAR(1 g) = 0.862 mW/g; SAR(10 g) = 0.618 mW/g

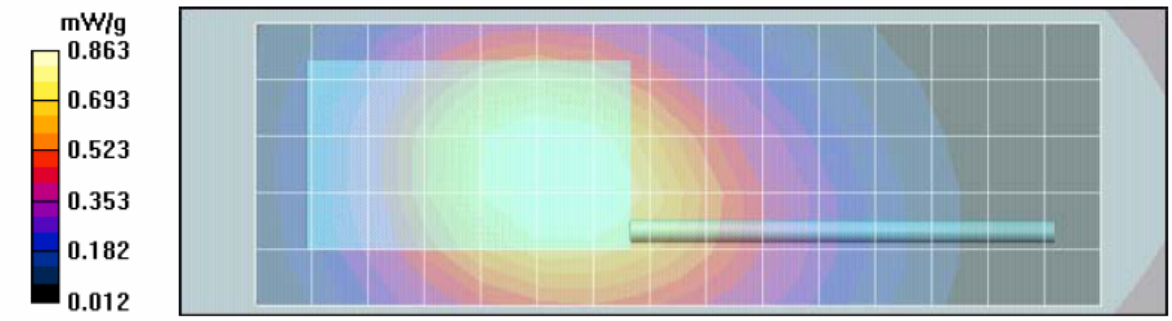


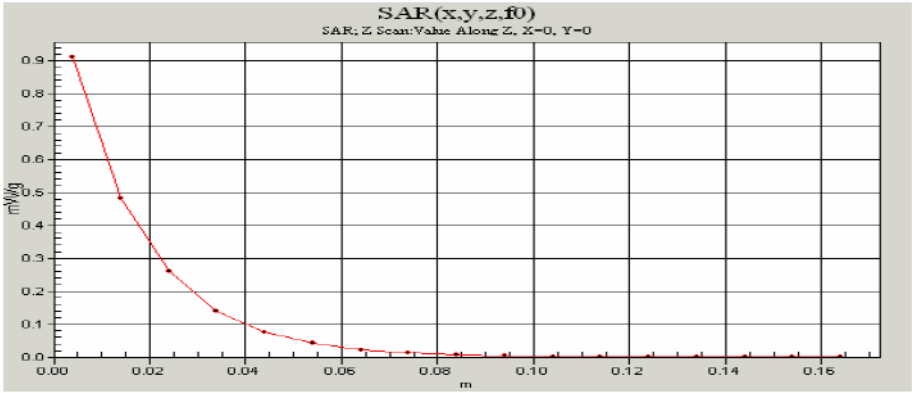


Motorola GEMS EME Laboratory
FCC ID: AZ489FT5846; Test Date: 7/24/05
Run #: ErC Face 050724-08
Sim Temp: 20.8 (C)
Model #: H85XAH6RR5AN-NWF1089A SN: 000AFJ00HZ

Antenna: OUT TX Freq: 902.525 MHz
Battery: SNN5705C Start power: .843 W
Carry acc.: NONE Audio/Data acc.: NONE

DUT with front housing separated 2.5cm from the phantom with BLUETOOTH on
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.53, 6.53, 6.53)
Duty Cycle: 1:1.05, Medium: 915 IEEE Head, Medium parameters used: σ = 1.02 mho/m, εr = 42; ρ = 1000 kg/m3
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Face template/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.0 V/m; Power Drift = 0.269 dB
SAR(1 g) = 0.872 mW/g; SAR(10 g) = 0.624 mW/g

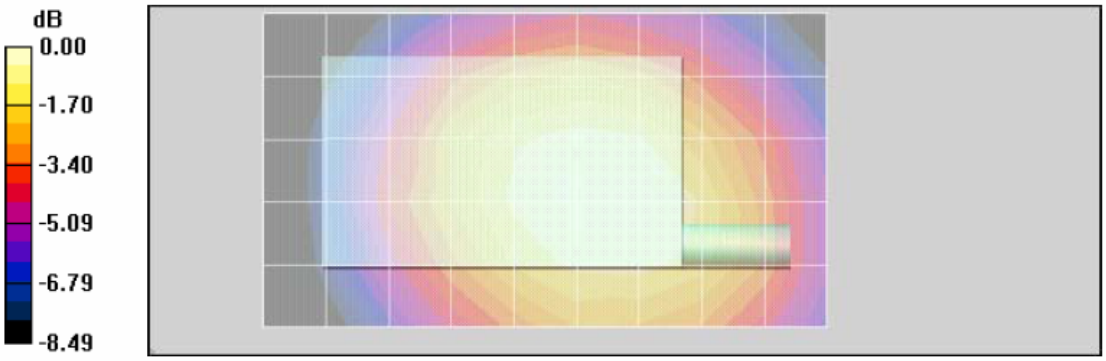


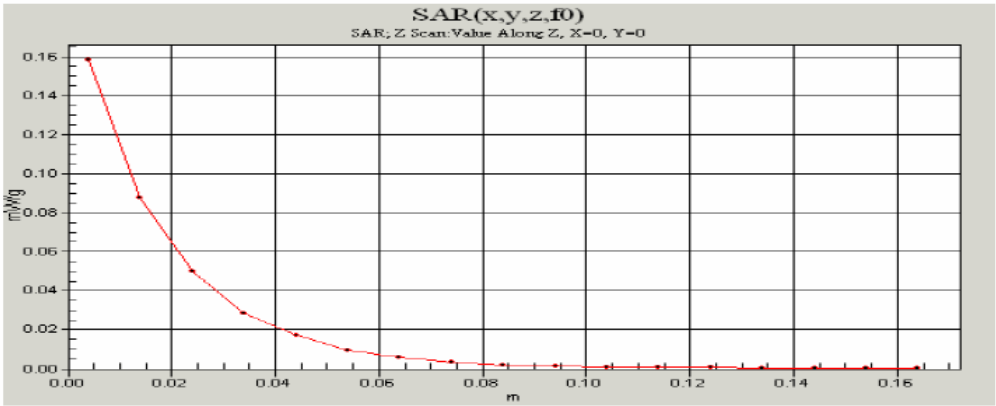


Motorola GEMS EME Laboratory
FCC ID: AZ489FT5846; Test Date: 7/24/05
Run #: ErC Face 050724-19
Sim Temp: 20.7 (C)
Model #: H85XAH6RR5AN-NWF1089A SN: 000AFJ00J2

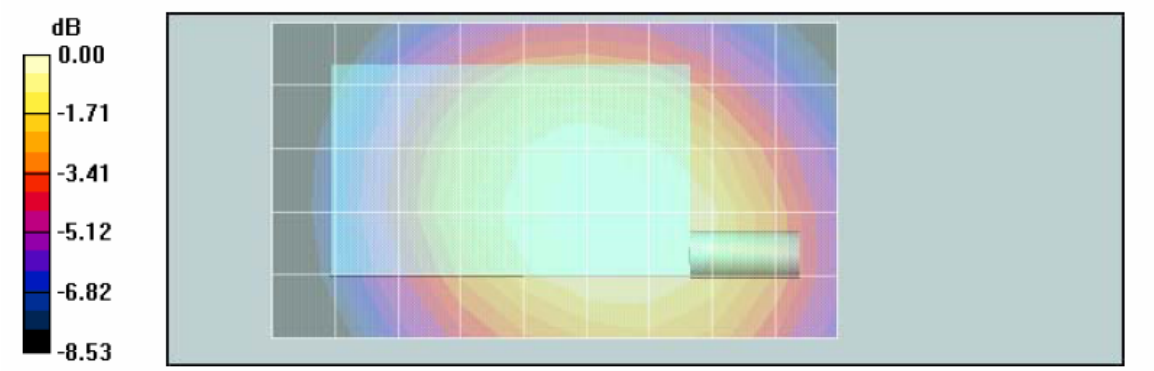
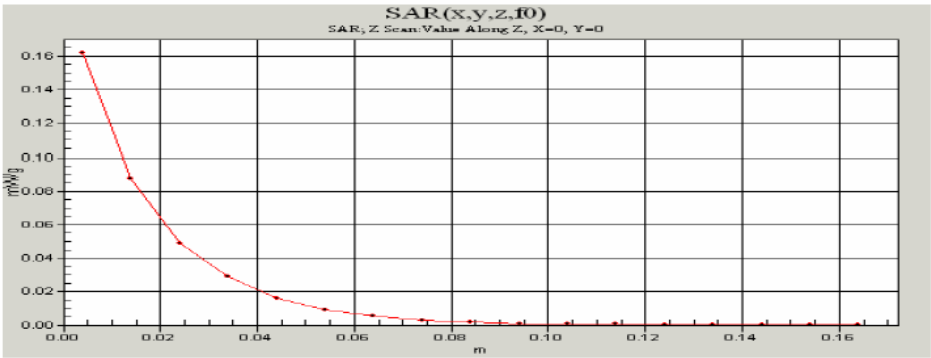
Antenna: IN TX Freq: 806.0125 MHz
Battery: SNN5705C Start power: .638 W
Carry acc.: NONE Audio/Data acc.: NONE

DUT with front housing separated 2.5cm from the phantom
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.53, 6.53, 6.53)
Duty Cycle: 1:6, Medium: 813 IEEE Head, Medium parameters used: σ = 0.93 mho/m, εr = 43.3; ρ = 1000 kg/m3
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Face template/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.7 V/m; Power Drift = 0.0544 dB
SAR(1 g) = 0.156 mW/g; SAR(10 g) = 0.113 mW/g





Motorola GEMS EME Laboratory
FCC ID: AZ489FT5846; Test Date: 7/24/05
Run #: ErC Face 050724-20
Sim Temp: 20.7 (C)
Model #: H85XAH6RR5AN-NWF1089A SN: 000AFJ00J2

Antenna: IN TX Freq: 806.0125 MHz
Battery: SNN5705C Start power: .640 W
Carry acc.: NONE Audio/Data acc.: NONE

DUT with front housing separated 2.5cm from the phantom with BLUETOOTH on
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.53, 6.53, 6.53)
Duty Cycle: 1:6, Medium: 813 IEEE Head, Medium parameters used: σ = 0.93 mho/m, εr = 43.3; ρ = 1000 kg/m3
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Face template/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.0 V/m; Power Drift = -0.110 dB
SAR(1 g) = 0.153 mW/g; SAR(10 g) = 0.111 mW/g